

DNA sequencing fragments, comprising the steps of:

- (a) obtaining one or more reference DNA sequencing data traces derived from the separation of reference DNA sequencing fragments reflecting the position of at least one base in a reference polynucleotide of known sequence;
- (b) evaluating the reference DNA sequencing data traces to determine a corrected time scale indicative of migration times at which peaks should occur;
- (c) sampling the experimental DNA sequencing data trace(s) at time points determined by the corrected time scale, and
- (d) assigning a base number to each peak found in the experimental DNA sequencing data trace(s) based upon the corrected time scale.

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3. (Amended) The method of claim 1, wherein the experimental DNA sequencing data traces and a first reference DNA sequencing data trace are derived from analysis of sequencing fragments in a common lane of a sequencing gel.

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5. (Amended) The method of claim 2, wherein the polynomial is a third or higher order polynomial.

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6. (Amended) The method of claim 2, wherein a defined number of bands are selected for evaluation from each of the reference DNA sequencing data traces.

13. (Amended) The method of claim 11, wherein the reference DNA sequencing traces and the experimental DNA sequencing data traces are derived from analysis of sequencing fragments in a common sequencing gel.

14. (Amended) The method of claim 13, wherein the experimental DNA sequencing data traces and a first reference DNA sequencing data trace are derived from analysis of sequencing fragments in a common lane of the common sequencing gel.

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16. (Amended) The method of claim 12, wherein the polynomial is a third or higher order polynomial.

17. (Amended) The method of claim 12, wherein a defined number of bands are selected for evaluation from each of the reference DNA sequencing data traces.

#### REMARKS

This is in response to the Official Action mailed on August 9, 2001 for the above-captioned application. Reconsideration of the application, as amended, and allowance of all claims in view of the remarks herein are respectfully requested.

#### Drawings and Specification

Applicants have submitted formal drawings with this Response to Office Action, which correct the Examiner's objections. In Figure 6, parts "10"-“16" are still depicted. The specification has been amended to include a description of the part identified as "12" as a "sequencer" in order to make the disclosure and drawings consistent. Applicants respectfully submit that this is the clear intent for component 12 since input 11 transmits sequence information, thus, no new matter issues are raised. Also, the information in the titles contained on Figures 1, 2, 4, and 5 as submitted originally has been removed from the drawings, and the information in the titles contained on Figures 1 and 2 has been incorporated into the specification into the detailed description of the invention where Figures 1 and 2 are discussed in detail. No new matter was introduced during this transference of information from one part of the application to another.

#### 35 USC §112 Rejections

Claims 1-22 are pending in this application. The Examiner rejected Claims 8, 9, 10, 14, 15, 16, and 19 as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Claims 1, 5, 6, 13, 14, 16, and 17 have been amended in response to the Examiner's rejections.

The Examiner's rejection to claim 8 was based on insufficient antecedent basis for the